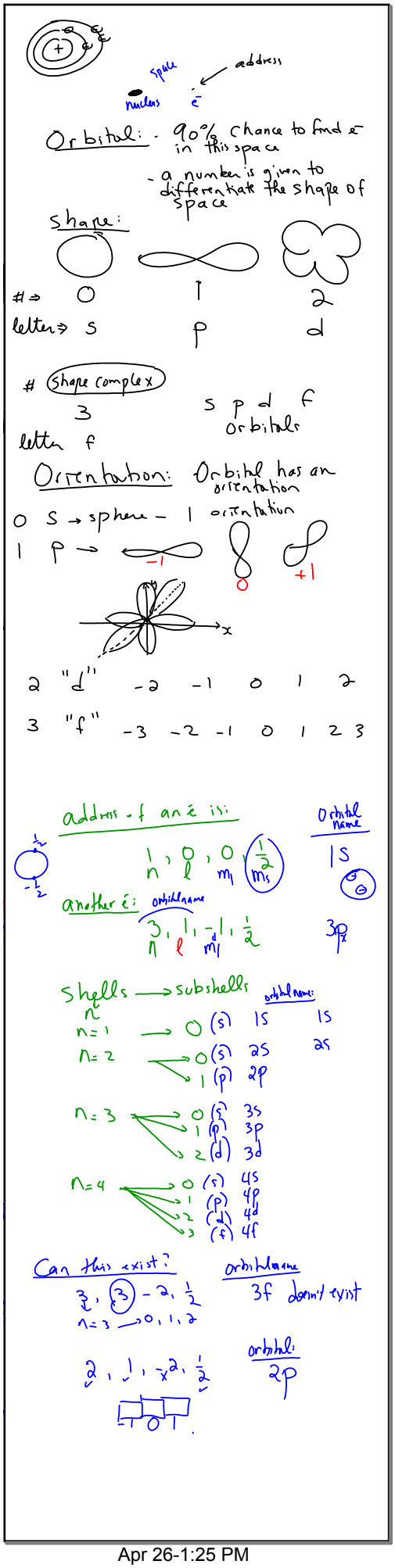
space
address
nucleus
e⁻
Orbital: - 90% chance to find e⁻ in this space
- a number is given to differentiate the shape of space
shape:
⇒ 0 1 2
letter ⇒ s p d
shape complex
3
s p d f orbitals
letter f
Orientation: Orbital has an orientation
0 s → sphere - 1 orientation
1 p → -1 0 +1
x
2 "d" -2 -1 0 1 2
3 "f" -3 -2 -1 0 1 2 3
address of an e is:
n, l, m_l, (1/2, -1/2 m_s)
Orbital name
1s
another e: orbital name
3, 1, -1, 1/2
3p_x
Shells → subshells
orbital name:
n
n=1 → 0 (s) 1s 1s
n=2 → 0 (s) 2s 2s
→ 1 (p) 2p
n=3 → 0 (s) 3s
→ 1 (p) 3p
→ 2 (d) 3d
n=4 → 0 (s) 4s
→ 1 (p) 4p
→ 2 (d) 4d
→ 3 (f) 4f
Can this exist?
orbital name
3, 3, -2, 1/2
n=3 → 0, 1, 2
3f doesn't exist
2, 1, -2, 1/2
orbital:
2p
-1 0 1

Apr 26-1:25 PM